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No. 12.



Several Opinions on the Origin of Honey-Dew.

MY attention has been drawn to an article on page 17, by my friend, Prof. Cook, on "Honey-Dew," and he sums up his article by saying that "Honey-dew is always a secretion from insects."

My object in writing is to say that I believe it is no longer a matter of conjecture, that under certain atmospheric conditions a saccharine substance or sweet juice exudes from the surface of the leaves of trees and plants. I at one time thought very much like Prof. Cook, but I have had ample opportunities of observing that in many cases insects have nothing whatever to do with producing honey-dew.

Some years ago, when I was staying at Hohwald, in the Vosges mountains, I had a very good opportunity of convincing myself that those were in the right, who held that plants do at times exude a sweet juice which is eagerly sought after by bees, while that produced in insect agency is very reluctantly taken by them, and then only when the natural exudation is not available.

Gaston Bonnier is one of the most careful observers and experimenters that we have at the present day, and he not only asserts that the leaves of trees do exude a saccharine substance under certain atmospheric conditions, but he has also been able to reproduce the phenomenon by placing the branches of trees in water and subjecting them to similar conditions. At any rate, he is not likely to be misled by not looking for the insects on the tops of the trees, as it is at the tips of the branches that any one but a tyro would naturally expect to find them. THOS. WM. COWAN.

Monterey Co., Calif., Feb. 20.

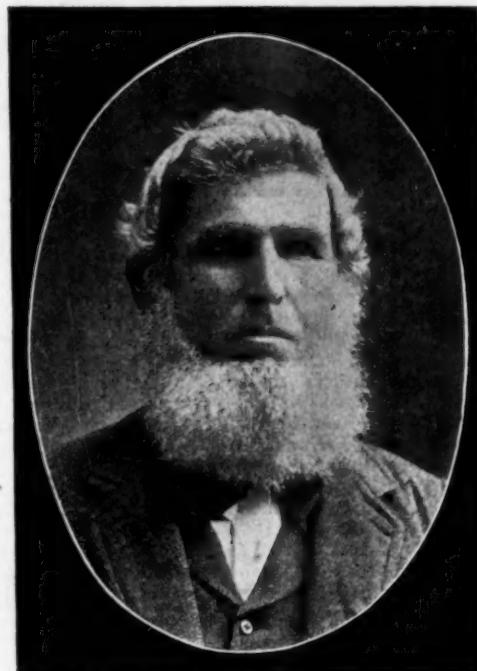
Prof. A. J. Cook, in his article on honey-dew, on page 17, hopes that all readers of the American Bee Journal will observe closely this honey-dew question and report.

To not a scientist, I have spent quite a little time in observing the origin of honey-dew, and from what I have seen and observed I have come to a different conclusion from what the Professor did when he says, "Honey-dew is always a secretion from insects."

I admit that much of the honey-dew is a secretion of insects, of which we can satisfy ourselves without climbing the trees where it exists, or where we find the honey-dew on the leaves by jarring the tree or brush, and looking towards the sun in the morning after sunrise, or in the evening a half or three-quarters of an hour before sunset, when you will see hundreds of sprays crossing each other in rainbow shape several feet high from where the insects stand on their legs while they operate their spraying-tubes. This is

quite a curiosity, as they will repeat their sprays a number of times, when the tree is jarred. The readers will see by this that the honey-dew will not only be found on the lower limbs and leaves of the tree, as the Professor indicates, but these sharp sprays will also reach the tops, as I have often witnessed on some plum-trees in my apiary, and on many other trees and plants.

But this does not prove that *all* honey-dew is secreted by insects, and that none exudes from plants and trees as a saccharine substance. I have seen my bees working lively on the joints of the cornstalks about the time when the tassels come into bloom; and when we had a dry spell previous to this, and then had a good, warm rain, which gave a vigorous growth to the corn, and an overplus of sap, probably more than the stalks could hold, and consequently produced honey-dew at the joints, there were no insects there. These conditions occur only once in three or four years.



C. Theilmann.

The honey is of very fine quality, and has a golden color. Some years I have received considerable surplus from this source.

Some years, when the right conditions meet, the birch-trees produce honey-dew in large quantities. Some years

ago I received from them about 1,500 pounds of surplus honey of the most delicious flavor, and almost water-white. The honey gathers at the junction of the leaves and the newly-growing twigs, where a small drop of "honey" can be seen from some distance away.

The birch and corn do not yield honey on their blossoms any more than does hazelbrush, at least I never saw bees work at all on the birch-bloom, but I have often seen them work on corn-tassels for pollen. Some bee-keepers claim that bees do not gather honey from corn-blossoms, which I think is correct.

The honey-dew on the birch-trees does not fall on the leaves like a "gentle rain," but drops on the leaves below from where it exudes, if not taken up by the bees or other insects. I have seen the honey glistening at the junctions of the birch twigs, only a few rods from my apiary, while the bees were briskly gathering the nectar. My bees sometimes were in such excitement that you would think every colony was swarming; but as soon as the condition of the atmosphere changed the excitement ceased. Sometimes it lasts only a day or two, while four or five days is the longest I have seen it in one season.

I am positive that this is no insect production, for I have examined it very closely and persistently.

I am not so sure that the acorn honey is an exudation of the overplus of saccharine substances of the tree or the acorn, or whether the acorns are pierced by insects to make the sap or nectar flow from them; the Professor seems to be "on the rail" himself about *this*, and seems to be anxious to know if the acorn honey-dew always comes from what he supposes to be wounds of the nuts by insects. (See page 459 of the American Bee Journal for 1886.)

I have examined the acorns closely from the lower part of a tree to the very top, but have not discovered any larvae nor any caterpillars on them, nor any other insects; but nearly all the acorns on the same trees were wounded horizontally right above the acorn-cup from which the "tannin" nectar oozed. The wounds extended to the center of the nuts, but I did not discover any larvae, tho I examined only some of them closely. I will make a more extended search the next time I get a chance.

The acorn honey is the poorest in taste and color of anything my bees gather.

In conclusion, I find that honey-dew is not "always" a secretion of insects, and that some trees and plants produce nectar under certain atmospheric conditions, regardless of insects, or blossoms, and that the definition in our dictionaries is in line with my experience.

Wabasha Co., Minn.

C. THEILMANN.

I have read the article on page 17, from Prof. A. J. Cook, in regard to the origin of honey-dew, and as he invites the readers of the American Bee Journal to make close observation and report our experience, I will report.

I am 66 years of age, and have handled bees more or less all my life, and now have 72 colonies. I have seen honey-dew as far back as I can recollect; I used to lick it off the hickory leaves when a child, because it was sweet. I have seen it on trees, shrubs, and all kinds of grass, and I have found it on my oilcloth when I was a soldier. I have found it on the plains, and much of what I know has been learned from observation. I have given it a great deal of thought, and my observation has led me to the conclusion that there are two kinds of honey-dew—one is the exudation of insects, and the other is caused by the conditions of the atmosphere, and falls as dew from the heavens. So thoroly am I convinced of this that I am astonish'd that a man so well informed as Prof. Cook should not know that there are two substances called "honey-dew."

The exudation of insects is a filthy sweet, not fit for man or bees, and when there is plenty of it, and no genuine honey-dew, the bees will deposit a lot of this worthless stuff; but if there is a good fall of honey-dew, the bees will leave this bug-juice and gather what is called a good honey-flow. This genuine honey-dew is clear as crystal; I have seen it hang in great drops on the blades of grass. We used to get our best clothes spoiled with it when we went thru the grass to Sunday-school when we were children. I have also seen it on the bunch-grass on the plains, and I have seen the cattle that run at large on the prairies with their horns all gummed and daubed over with honey-dew in great profusion where there were no trees to climb, and no aphids to be found—nothing in all the scope for them to subsist on.

This honey-dew makes the best of honey. A test will prove that it will candy quicker, and be whiter than the exudation of insects. Atmospheric conditions may occur when there is an abundance of insect exudation, and the

two may be mixt. But at the same time the genuine honey-dew may be found where no aphids or honey-exuding insects exist. The exudings of insects are odorous, while the genuine honey-dew is not, unless perfumed from the fragrance of flowers. It is the condition of the atmosphere that causes nectar to secrete in flowers; the same conditions cause honey-dew to fall.

Volumes may be written on the best kinds of honey-plants, but all fail to secrete nectar unless the proper conditions of the atmosphere are at hand. How often do we hear complaints that there was no nectar secreted in the white clover, or in the basswood bloom; and I have even read of sweet clover failing to secrete nectar. The flowers of all honey-producing plants are susceptible of secreting nectar when the conditions are present. Some are more susceptible than others. Thus we have our best honey-flow one season from one flower, and sometimes from another flower, owing to the congenial conditions for the one flower or for the other.

We must look above the trees for our blessings. Is it not just as reasonable that honey-dew is a result of the conditions of atmosphere, as it is for the elements to be full of malaria or of some epidemic?

S. W. MAXEY.

Kittitas Co., Wash.

I have heard and read a good deal about honey-dew lately, so thinks I, I'll keep mum, those other fellows having said enough concerning it. But after reading Mr. Nash's article, on page 98, and tussling and gurgling it for awhile, it failed to go down. He thinks Prof. Cook is wrong about his statement, that honey-dew is deposited by insects or bee-lice, as we call them here.

Again, he says some facetious writer calls it "bug-juice." "Tis naught else but bug-juice, pure and simple. I have had experience with it some six or seven years, and have never failed to see the little fellow that makes the juice. But 1898 capt the climax. In the spring we get a few sections of it from extra-strong colonies, but last year I received between five or six hundred sections filled with honey-dew. Some people even go so far as to think, or say, that this filthy stuff comes from heaven. Had the promist land flowed with milk and this kind of honey, our forefathers would have gone to the "Himmels" pretty quick.

These insects, or tree-lice, are mostly found in spring on the plum-trees after fruit is set, and, if not taken care of very soon, will ruin both tree and fruit. They are almost always on the underside of the leaves. (That is the reason why this honey is always on the upper side of the leaves and not on the underside.) I have seen them so numerous as to cover both branches and leaves completely from stem to stem, and if disturbed would give you a small shower-bath. But last year they were just as numerous on both the hickory and black oak. The underside of the leaves would be covered with small lumps resembling warts, and on being broken open would contain a small larva of these insects, which lie dormant until warm weather of spring hatches them.

Another peculiarity about honey-dew is this: Bees will not work much on anything else when they can get this stuff. We had about as much sweet clover in 1898 as the season before, but nary a bit of sweet clover honey did we get. Bees that have not been fed in the fall, or those wintered in small hives without protection, have surely "gone up," as the cold has been very severe here, bees not having a flight in six weeks.

I do not want to cross swords with Mr. Nash concerning his article. Maybe trees do sometimes have a "sweating spell," but I have failed to see them in such a sweat without having good reasons to do so.

Cook Co., Ill.

PETER J. SCHARTZ.



Rendering Beeswax—How Loss May be Avoided.

BY I. W. BECKWITH.

WHEN the comb is new, and especially when it contains honey, and the weather is hot, there is probably no better method of rendering it into wax than by the use of the solar extractor; but with the conditions reversed, the solar is "no good." In my experience with old, black comb I get little or no wax in this way; it being nearly all left in the residue, which, on getting cold, is as solid and hard as a lump of wax. One writer, I think it is Dr. J. P. H. Brown, of Georgia, says he thinks it is no loss to have this wax left in the refuse, because it makes such good fuel. It seems to me that wax at 25 cents a pound is rather expensive fuel; besides, the waste will burn just as

well without the wax; and as that from the solar extractor is nearly half wax, I propose to tell how to save it.

For a press I take two pieces of 2-inch plank 10 inches wide, and 3 feet or more in length, and cut them into the shape shown in the accompanying engraving. In the lower plank, near the wide end, I make a hole 2x3 inches in size, and across it string 6 or 8 wires, fastening them with nails or staples. Now lay one plank on the other, with some sticks between to hold them about $\frac{3}{4}$ of an inch apart, and hinge them together with a pair of 6-inch strap hinges, bending the hinges to fit. Tack a 6-inch piece of cloth around the wide end of the upper piece, letting it extend up as far as the narrow portion. This is to catch the wax that otherwise might fly out and soil clothing, furniture, etc. This cloth is not shown in the picture, as it interfered with a clear view of the press.

Get a tub—one 10 inches deep cut from the end of a barrel will answer—fasten a bar across it 3 inches from the top and 6 inches from one side. Put the lower end of the press on this bar, and the other end on some object that will raise



Rendering Beeswax.

it off the edge of the tub. Throw the upper handle back against the wall or some other object. Soak the tub, and have a little water in it. Warm the press just before using by pouring hot water on the inside faces. Make a strainer-holder of a piece of No. 6 wire fastened to the tub, so that the top-ends will be about 6 inches apart and 8 inches above the top of the tub. Make a sack-strainer 9 inches wide and 16 inches deep of some strong stuff—I use a piece of seamless grain-sack.

The method of operation is as follows: Put a boiler containing a pail of water on the kitchen stove; and when it boils make the fire as hot as you well can; then stir in comb as fast as it will melt, but not much faster, continuing to do this for about 15 minutes. Let it stand, stirring often, and when it boils freely set it by the side of the tub next to the strainer-holder. Hang the strainer on the holder, hold it open with the left hand, and fill $\frac{1}{4}$ to $\frac{1}{2}$ full. The more liquid wax it contains the greater the quantity that can be put in. There is not much gained, however, by putting in a large quantity, while it increases the danger of bursting the sack. Lay the strainer on the press with the bottom end next to the hinges, fold the top end back on the filled part, then bring down the handle and put your weight on it if you are not very heavy. As soon as the wax is nearly done running, dip your fingers in cold water, throw back the handle, lift the edge of the strainer which is toward you, fold it back on itself, and bring down the handle again. Throw back again, turn the strainer one-fourth round, fold back and press again; each time making the fold as even in the center as you can. You will now have a "cheese" about 4 or 5 inches square, perhaps an inch thick, and in four equal layers.

If you have done your work well you will now have no wax in the residue; which will shake out almost like dry

meal; while the strainer will be entirely free from wax except at the edges. If you have *cookt it too long* the cocoons will have become so viscid that when you bring pressure to bear they will stick to the strainer like a mass of glue, and you can get nothing from it. I think the greatest reason why rendering wax by boiling is not more popular is that it is generally *cookt too long*; so, keep the fire hot, and cook only a short time. If the contents of the boiler are likely to become too cold while you are straining, put it back on the stove while you press; but you should not be more than two minutes filling and pressing a strainer full.

Don't put the hinges too near the corners, since the pressure is mostly near the middle, or you will be liable to split the plank.

Don't put much heavy comb in the boiler at one time, and leave it without stirring, or it will be liable to burn and so color the wax.

Don't put any lumps of wax in the boiler after any comb is in; as the lump will be so long melting that the cocoons will be liable to cook too long.

Save all the residuum from the solar extractor, and, at the end of the season, chop it very fine, boil it, and then run it thru the press. The blackest comb will make almost as light-colored wax as will the lightest combs, if it is not cookt too long.

Dr. Miller, in reply to the question, "How can I keep the wax from sticking to a wooden mold?" replied, "Wet the mold." I will inform the Doctor that no amount of wetting or soaking will keep the wax from sticking if the wax is put into the mold very hot, and then cooled slowly; as the hot wax will drive all the moisture from the surface of the wood, leaving it dry, and then the wax will stick.

The Doctor has also told us to cool the caking wax in any vessel very slowly to prevent its cracking near the edges. When convenient I set the vessel of caking wax into ice-water, and if it shows a tendency to crack, as it seldom does, I run a thin knifeblade between the wax and the tin, cutting no deeper than $\frac{1}{2}$ inch, and have no more trouble.—Bee-Keepers' Review.

Fremont Co., Wyo.



An Experiment in Producing Extracted Honey.

BY C. DAVENPORT.

AS most of the readers of the American Bee Journal probably know, I make a specialty of comb honey, but I have the last few years run a number of colonies for extracted, and perhaps the results of another experiment in this line which was conducted last season may be of interest to some.

Early in the spring, 30 colonies in good condition, all in 8-frame hives, were selected. They were divided into three lots of 10 each. In lot No. 1 the queens were confined by zinc to the lower story; in lot No. 2 they were allowed two stories for brood-rearing; while lot No. 3 had no restriction in the way of zinc, the queens being allowed their will in three or four stories. Perhaps I should say that with all, the upper stories were of full depth, and were placed on top instead of under the brood-nest, care being taken to give these upper stories as fast as they could be occupied, so that in lot No. 3 the queens had unlimited room for brood-rearing thru the entire season; and while lots Nos. 1 and 2 were confined to one and two stories for brood-rearing, they had all the drawn combs they required for storage.

The flow from miscellaneous sources in the spring was sufficient to keep up brood-rearing, and the weather on the whole was more favorable than the average of springs here. I do not remember ever having colonies in better condition in the spring than they were last season.

The flow from clover opened and continued in a scant, irregular way for about two weeks, when basswood commenced to yield. This basswood flow was at no time very profuse, and clover and basswood were both work at the same time—something that seldom occurs here, for usually when basswood commences to yield everything else is largely forsaken for it.

An interesting thing to note about basswood is its different characteristics in different localities of about the same latitude. Mr. Doolittle says in his locality he never knew it to fail to yield considerable honey, while last year was the first basswood honey here, so far as surplus was concerned, for three years; and it not only fails to blossom here, but I have seen the trees literally loaded with bloom when it would fail to yield, and while there have been many theories advanced to account for this, I believe there is some reason or cause as yet unknown, for I have known it to

yield well some years, where in others, with apparently the same climatic and atmospheric conditions, it would be an entire failure. But while basswood often fails, it may be of interest to state that there was never a failure from all sources known in this section. The late Mr. B. Taylor, who was engaged in bee-keeping in the southern part of this State for over 25 years, reported, I believe, that about 50 pounds per colony was the smallest crop of comb honey he ever had. I have not done as well as this myself, but I have never failed to get each season from some source what might be called a paying crop.

An incident somewhat curious in this connection occurred a few years ago. That season, if I remember rightly, the yield from both clover and basswood was light, but later a large amount of light surplus honey was secured from a species of sunflower. This plant was described and illustrated some time ago in Gleanings in connection with a description of a visit the editor made to Wisconsin.

The season I have mentioned, this plant blossomed here in great profusion, and seemed to yield nearly equal to basswood, but altho it blooms here more or less each season, I never knew it to yield much in the way of surplus before or since.

Of the 10 colonies which composed lot No. 1, and in which the queens were confined to one story, 7 swarmed; of the 10 comprising lot No. 2, in which the queens were allowed two stories, 6 swarmed; and in lot No. 3, where the queens had unlimited room, there was no swarming. Nothing to prevent swarming was done with any of them, except in the way of ventilation and shade, and all were treated about equally in this respect.

From lot No. 1 about 500 pounds of white clover and basswood honey was extracted. About the time of the last extracting the indications were that there would be no fall honey, so in order to avoid feeding, if this was the case, as it turned out to be, enough honey was left in the frames of each colony in all three lots to carry them over to the following spring.

From lot No. 2 about 175 pounds was obtained. Those in lot No. 3 were only able to spare about 150 pounds, all told. No increase was allowed, for the working-force of all colonies that swarmed was kept together, and the two finally merged into one again; and in lots Nos. 1 and 2, in which swarming occurred, there was a small amount in the way of wax to be added in their favor; aside from this it will be noticed that the colonies that had their queens confined to one story yielded considerable over three times as much surplus per colony as did those whose queens had unlimited room. The matter is explained by the fact that eight frames were about all the queens, on an average, could keep full of brood and eggs in time for them to develop into field-bees for the main-flow. Later an immense force of bees was reared by those colonies that had more room, and these thousands of extra bees per colony were reared from, and had mostly to live upon, what the lesser force were able to gather during the flow.

Here I would like to say that I have never said, or at least never intended what I have written to mean, as some have since claimed, that the average of queens could not keep more than eight frames filled. What I did say, or intended, was *at the right time*; and by this I mean so that the brood and eggs will develop into bees that will be of service in securing the main harvest. A force of bees reared out of season to be of value as field-bees, in excess of what is required for the welfare of the colony, are a large factor in reducing the amount of surplus; and in my opinion this matter is not given the consideration its great importance should insure it. But it is no more than fair for me to say that it is very seldom that the conditions of a season here would be as favorable to, and allow, such an immense advantage to be shown in favor of a single brood story, for we had a great drouth here the latter part of the season, and nothing much was secured after basswood. While it is no uncommon thing not to get any surplus fall honey, I never before remember when at least some was not stored in the brood-nests, and if this had been the case last season more white honey could have been taken from lots Nos. 2 and 3.

Another thing that perhaps I should say is, that on account of the colonies comprising these two lots being stronger in bees, I considered it necessary to leave, on an average, probably seven pounds more per colony than in lot No. 1.

In giving the different amounts of surplus from each lot, I have said "about" instead of giving the exact amount. This is for the reason that it was measured in-

stead of being weighed; but the amounts would vary but a few pounds either way from the figures given.

Before closing, it may be better to mention for the benefit of beginners, that it would not have been a difficult matter to handle the swarms from lots Nos. 1 and 2 in such a way that the results would have been as much in favor of lot No. 3 as it is against it. As I have said, with the colonies that swarmed, the entire working force was kept together. If they had been allowed to divide up and increase, the results would of course have been altogether different. While this swarming made extra work with two lots in which it occurred, it was but little more than that of handling and looking for surplus honey in two or three stories containing more or less brood, and the other work that this entailed. I would like to explain just how those swarms were treated, but the space I am allowed forbids.

Southern Minnesota.



The Spring Management of Bees, Etc.

BY C. P. DADANT.

[Continued from page 165.]

In the previous article I called the attention of the reader to the necessity of great caution in feeding. It is worthy of notice that the excitement, which I have mentioned, does not continue as intense if feeding is practiced regularly with certain colonies. The bee is a very sagacious insect, and very soon discovers in what manner the food comes. Fed for a few days in succession in a certain spot, a colony of bees will thereafter expect the food in the same manner, at the same hour, and in the same spot. The excitement diminishes and the danger likewise.

Now as to the effect: Bees fed with combs of sealed honey will use this honey sparingly, just as if it had been their own crop. But when fed with liquid food, especially warm food, the effect is the same as that of a honey crop. It entices them to breed. Each bee, as it carries its load from the feeder to the cell, seems to impart the news to all it meets. The honey-sacs are all more or less loaded with the welcome sweet, and the queen is offered more food than otherwise. So her laying propensity is increased just as much, and in the same way, as that of the barnyard hen when the winter's manure is thawing out.

If too much food is given, the bees will store it in the cells, and fill them up unduly. So this also must be guarded against. We are feeding only for breeding, and must leave the room for brood. All we need is to make the bees feel that they have a sufficient supply to encourage them to continue their breeding. If the hive is well sheltered, and the space is adequate to the present needs, there is no need of fear of chilled brood.

The feed given must not be as thick as the winter food, and if honey is used it is advisable to add a small quantity of water. We all know that the bees need more water when feeding brood on old honey than on fresh nectar; and I believe that thin food, if not unreasonably thin, will induce more rapid breeding and require less trips for water. The water-hunting, in my opinion, is responsible for more spring losses than any other item, unless it be actual want of food.

As our colony grows and becomes more populous, the queen will enlarge her circle and more combs will have to be added to the room of each weak colony. Here, again, discernment must be used. If too many combs are given at one time, and if some of them are placed between the brood-combs, some risk may be run of chilling the brood. This is the most dangerous practice, and I believe more objections have been raised against the spring forcing of bees from this practice than from any other. Yet, if the weather is good, and the thing is not overdone, I know that something may be gained by placing empty combs between combs of brood. The outside combs usually contain pollen and honey, and act as a partition-wall when dry combs are placed beyond. If the queen goes to these empty combs, her brood is practically divided in two, and she will often be compelled to delay her laying in those combs, owing to this objection. But if the last comb of honey and pollen is drawn outward, and the empty comb placed between two combs of brood, she will readily fill it with eggs. The apiculturist is thus called upon to judge, by the strength of the colony, the number of bees, and the age of the brood, whether he may safely increase the space.

If things are carefully done and a vigilant eye kept over the hives, this method is by far the most successful. The populous hives themselves may be made much more service-

able to the apiarist with a little timely feeding. Some of my readers may have occasionally noticed in the spring a colony or two in any apiary running over with bees, and fairly roaring with activity while the others are only slowly progressing. A close watch would have shown you that these two or three colonies have had a little extra feed in the shape of stores from deceased colonies whose condition had not been perceived in time to prevent the strong ones from robbing the little honey remaining in their combs. If such accidental feeding is productive of so wonderful results, what may not be achieved by judicious provision?

But in spring management, such as I have described, I repeat it, much discernment must be used. It is only the careful man who will succeed by constancy and perseverance; but his success will be gratifying when he compares his results with those of his more careless neighbor.

As to question No. 2, in Mr. Gray's inquiry, I would advise to use the full combs on which to hive swarms, and the foundation for the extracting-story, if a choice is to be made. In hiving a swarm on sheets of foundation there is always more or less danger of its being pulled down by the weight of the bees, before it is fairly fastened at the top; while in producing honey the bees gradually occupy the combs and have ample time to fasten the edges to the wood before loading them with honey.

For extracting-supers we use combs only six inches in depth, and have never had any trouble in using foundation for this purpose. We would not alternate built combs with foundation except where an additional brood-comb is accidentally required, because it usually happens that the bees lengthen out the combs while also building the foundation, and the one becomes out of proportion in thickness to the other.

Hancock Co., Ill.

CONVENTION PROCEEDINGS



Report of the Chicago Bee-Keepers' Convention.

BY A SHORTHAND REPORTER.

[Continued from page 163.]

The question-box was then taken up by Dr. Miller, as follows:

WAX-SCALES IN FRONT OF A HIVE.

QUES.—I have noticed a considerable quantity of wax-scales, like sawdust, before each hive—what is the reason for it, and of what import?

Dr. Miller—I remember very distinctly the time when I went off some little distance to ask that question of a neighbor; I was somewhat exercised over it. One thing you will notice, if the bees have not been disturbed, you will find it in streaks along under the frames in rows. In Germany they take that, carefully sift it, melt it up and get what wax they can; we don't do it in this country; the Germans are much more careful about saving anything than we; it is simply cappings and remains that are thrown down by the bees.

HANDLING BEES ON A HOUSE-ROOF—FOUL BROOD.

QUES.—What is the best method of handling bees in a city on the roof of a house? What number of colonies would be the most profitable?

Dr. Miller—C. F. Muth, who unfortunately committed suicide not long ago, possibly had more experience in that line than any other man in the country. I don't know that the handling of bees in his case was any different from what it would have been on the ground. There are some things that make a difference, for instance, the swarms—and I would like to know more particularly what the questioner had in mind. When an apiary is kept on the house-top, for instance in the city as Mr. Muth's was, it would not be so convenient for him to have them swarm, and perhaps a little different practice would be used in that respect. Let me see, how many are there here who have had experience with bees on housetops? I don't see any hands. I should certainly have all queens' wings clipt. I should take the same course as with the bees on the ground.

Hundreds of colonies might be kept in one apiary in some places; and perhaps it might not be profitable to keep more than a small number for lack of pasturage in some places and some States. Chicago is one of the best cities,

where its suburbs give so much sweet clover, and perhaps a hundred colonies might be kept. I don't believe you would feel very safe in going over that. Perhaps not over 75.

QUES.—Are bees in any particular climate affected by foul brood more than another?

Dr. Miller—So far as I know foul brood will work in any climate, and it is not a new thing by any means, altho with a great number of bee-keepers perhaps it is a new topic and a new subject, yet there is nothing very new about it. It has existed for many years, and I don't know when the disease came; I know that more than a hundred years ago it was well known.

BEE-KEEPING IN TOWNS AND VILLAGES.

QUES.—Is it advisable to encourage bee-keeping in towns and villages?

Dr. Miller—What is bee-keeping for? Two things—getting the honey, that is one thing; that is not the main thing. The main intention, I suppose, for which God created bees, was to have them fertilize the flowers, and wherever there are flowers of a kind that need fertilizing by bees, there it is a good thing to have bees kept. They are in towns, and about towns as well. I should say it is a good thing to encourage the keeping of bees in towns and cities, everywhere; from a selfish standpoint I should say, "No, I don't want everybody to keep bees; I want to have a monopoly of the honey-trade." But when you come right down to it, the greatest good for the greatest number, bees should be scattered all over the country wherever flowers are, to fertilize them, and this includes towns and villages. It is the same in villages and towns, precisely the same as it is everywhere else; it is desirable for the sake of the fertilization of the flowers to have enough bees everywhere to do that work; it is also desirable to have everywhere enough bees to secure nectar that would otherwise go to waste. Now, there you have the whole thing; there is that nectar that would go to waste if there were not enough bees to gather it, so it is desirable to have enough bees to get it.

HOW MANY COLONIES IN ONE APIARY?

QUES.—How many colonies can profitably be kept in one apiary in a city or town?

Dr. Miller—Just the same as elsewhere. You can tell something about it, but it's hard to know for certain; every now and then some one will say that there can be three or four hundred kept in a place. I remember a gentleman a few years ago; he was very much interested in watching him; he said he was going to keep so many colonies, naming about twice as many as I felt safe in keeping, but he was unsuccessful. It is like anything else, you must go according to your pasturage. One man in California has kept 600 colonies in one place; it is possible he might do better with 500; it is one of the things you don't know about. I might have 100 colonies and not get as much honey as if I had only 80 or 90. The next year it may be a better season, and 110 will do just as well as 100; you see how it is; if you live a thousand years you will know more about it than you do now; it is very difficult to tell in a city or town; it may be that it is just exactly the same thing in the country; it may be a little different; it depends upon the pasturage. If there is any one that has any definite knowledge about this, we would be very glad to hear. Mr. Kreutzinger, can you tell us how many colonies can be kept in one place?

Mr. Kreutzinger—It depends; I have had 114 in one place; 84 have done better. I find that around Chicago (Cook county especially) there is plenty of sweet clover—100 colonies can be kept in one place safely; other places where there is only white clover which is to be depended upon every year, I would rather recommend 80 colonies, no more; in other places where basswood is you can have a thousand colonies in one place.

IS COOK COUNTY OVERSTOCKED?

QUES.—Is Cook county, Illinois, overcrowded with bee-keepers?

Dr. Miller—That is not a question for me to answer; I don't know how many bee-keepers there are in Cook county; it will bear a very large number of bee-keepers.

Mr. Moore—There are about 150 persons keeping bees in Cook county.

Dr. Miller—if there are as many as 200 there are probably as many as the ground will stand; a man can't keep a very large number of bees; if he cares for the money return he becomes a little discouraged if he can't increase and have a larger number. I should think Cook county differs very much from other counties, because there being so much larger population there is a larger number of people who will be interested in bee-keeping and entirely inde-

pended of the money return in it; you will find amongst so large a number of people as are in Cook county, here and there a man who cares so much for the thing that he would keep perhaps a half dozen colonies to study, even if he had to pay for the privilege of keeping them and give away the honey besides. Perhaps I am inferring there is a little too much enthusiasm on the subject. In my own case, altho I have kept bees for more than a third of a century, if it cost me something to keep them I would not be without a few colonies on account of the interest I have in bees. You will never find the time to come when there are not some new questions and problems to study over; at least it has not been so up to 1898; I don't know what 1900 will bring. I should say that Cook county is not overdone with bee-keepers. I think likely there is some danger of the ground being overstocked with bees if there are 200 bee-keepers, or even 150, and each one should keep a considerable number of bees; there is some danger in that direction.

PROTECTION AGAINST OVERSTOCKING WITH BEES.

QUES.—What protection can a bee-keeper get against another bee-keeper coming into a locality already overstocked with bees? In my neighborhood we are well stockt. Last spring a Chicago bee-keeper moved several colonies of bees within a few blocks of my apiary, which were neglected so much during swarming-time that small clusters could be found on bushes and under sidewalks. Do you think such careless management will cause the public to get laws prohibiting bee-keepers from keeping bees within the city limits? Within a circle of 1½ miles from my apiary I have located 172 colonies of bees. What protection can a bee-keeper get when overstocked with bees?

Dr. Miller—So far as I know there is positively no protection he can get at all from existing laws. There is a moral protection he may have if his neighbor is an intelligent person. If the locality is already overstocked an intelligent bee-keeper would hardly want to go into that locality for two reasons: In the first place, on account of his selfish interests, and, in the second, out of respect for those who already occupy the ground. There is first and last a good deal said about intruding upon territory already occupied, and there is a moral side to the question, so that it is generally considered that a man, if he is well informed and of good principles, will not want to go into a locality already fully occupied. It is damaging to him and to those already on the ground. A wise man will desire to find a field unoccupied; however, things of this kind will sometimes occur, and I don't know of anything that will help the case except to try to talk to a man and inform him.

A Member—I would suggest an injunction.

Dr. Miller—That won't count; can't do it. If you have the place, and have say 100 colonies of bees, and that 100 colonies fully occupies the field, and I can buy or rent a lot of ground within 10 rods of you, I can put my bees down there and you can't help yourself.

Mr. Moore—By the way, Dr. Miller, I had a notion to break in at the start and ask if this is not a sore spot. There has been some pretty lively discussion between yourself and others, and the editor of Gleanings.

Dr. Miller—No; Gleanings' editor has been almost always on my side.

Mr. Moore—You took the ground that a man had a sort of a vested right if he got there first.

Dr. Miller—All agree on that. If you have the ground already occupied it is a mean thing for me to come in and "fish in your hole," as the fisherman says; that is the way it stands; all agree on that. I believe the time might come when it would be a desirable thing if in some way I could secure a certain territory where I know that no one will come in and intrude upon me.

Mr. Moore—Some one has askt the question, "Does a man when he deeds 600 acres of land deed the bee-pasturage?" It was answered that he deeds the land, and he does not give any title whatever to the nectar in the flowers, but the time will come when he can buy the nectar on 600 acres by paying for it.

Dr. Miller—I am afraid I said that; nobody in this world would be foolish enough to say that but me. Prof. Cook once said, "This much is certain, that you can't hold the nectar; it belongs to the public."

Dr. Miller—Another question is involved: Do you think such careless management will cause the public to get laws prohibiting bee-keepers from keeping bees within city limits? Certainly, bee-keepers should not keep bees where they may disturb others. We should be exceedingly careful. While I may have the legal right to keep my bees within so short a distance of another man's house that they

will make trouble for him I have not the moral right, and I am very foolish if I do it. It is a great deal easier to *keep* out of trouble than to *get out* of trouble. You should be exceedingly careful not to do anything in that line that will make trouble for others.

DISTANCE TO KEEP BEES FROM HIGHWAY.

QUES.—Would a law governing distance from public highways to which bees could be kept be beneficial to bee-keepers?

Dr. Miller—I somewhat doubt that. They have some laws in the old country with regard to it. It is possible that it would be in some cases a good thing, but there is so much good common-sense in this country I very much doubt whether a law of that kind is needed.

BEST HIVE FOR WINTERING OUT-DOORS.

QUES.—What is the best hive to winter out-of-doors in Cook county?

Dr. Miller—I don't know, and if you commence talking about that you will spend all of your time. Here is a man who is certain that his hive is the very best in the world; and another who knows his is worth three of the other man's, and so on. If you have had success with a hive, that is the hive for you, and it is quite possible that what you have done the best with may not be the best hive for me to winter bees out-doors.

WINTERING OUT-DOORS OR IN THE CELLAR.

QUES.—How many Cook county bee-keepers winter their bees out-doors?

Dr. Miller—How many winter their bees out-doors? [16.]

Mr. Kreutzinger—I am keeping my bees in a shed specially constructed. I used to keep them in the cellar, but somehow water got in.

Dr. Miller—I would like to hear from some of the rest who don't keep their bees out-doors, and don't keep them in the cellar?

Mr. Doerr—I winter my bees in a specially-constructed bee-house, made of one-inch lumber.

Dr. Miller—I suppose that would be counted out-doors? How many keep your bees out-doors all the year around, thru the winter just the same as in summer? [2.] Tell us about how many you winter, Mr. Goelet.

Mr. Goelet—23.

Dr. Miller—How many thru the season?

Mr. Goelet—21.

Dr. Miller—Will you tell us whether there is anything to protect them particularly from the winds all the year around?

Mr. Goelet—I have them fairly well guarded from the north wind, alongside a big fence. I have double hives packt with sawdust.

Dr. Miller—You keep them packt winter and summer?

Mr. Goelet—Yes.

INTRODUCING VIRGIN QUEEN TO QUEENLESS COLONY.

QUES.—What is the quickest way to introduce a virgin queen into a colony that has been queenless for several days?

A Member—I just drop the queen in on the combs, and have never lost one.

Dr. Miller—There is a possibility that next time you do that the queen will be a dead one. Don't count too much on that; if you have done it 147 times and never lost a queen you might feel pretty safe, but I would not consider you would always be safe if a colony has been queenless for several days. I will tell you one of the things that may make a difference—the time of day you do it; if you do it in the evening you will be a good deal safer than in the middle of the day. In the evening there are no other bees flying around. If you try it when no honey is coming in you will jeopardize your queen. Another thing is the age of the queen. You said, "I just drop them in on the combs and have never lost one." I don't believe you will if you drop them in while they are so young that they have just come out of the cell; a young queen is not treated by the workers as the older queen is; they don't seem to think there is anything they need care for. Let a laying queen drop in and the bees will attack her at once.

[Continued next week.]

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

A Mammoth Red Clover Correction.

On page 87 I said that mammoth red clover blossoms at the same time as the other. It seems that I did not know what I was talking about. I am indebted to Hon. R. L. Taylor for the following correction in the Bee-Keepers' Review:

"In this locality the mammoth clover blossoms two to four weeks later than the June clover—so much later that the first crop bears the seed; while June clover blossoms so early that, on account of the scarcity of appropriate insects to fertilize the blossoms, the first crop yields no seed. Again, there is seldom much, if any, second crop of mammoth clover; and, hence, very little fall bloom; while, under favorable circumstances, the June clover yields a good second crop well filled with seed."

Evidence of a Mouse in the Hive.

I send a sample of stuff I pulled out of one of my hives. I pulled out about a pint March 2. I examined the hive last Saturday (March 4) and pulled out about a pint more of the same stuff, and found that the bees had cut considerable from the bottom of five combs. This is the only one of my 11 colonies in which the bees have done this. I thought at first that the mice had a hand in this, but there is no way for the mice to get into the hives. What is the cause, and how can I prevent it, if any harm is being done?

ILLINOIS.

ANSWER.—Mice. Sure. The sample sent is made up of pieces of comb smelling very sweet and nice, some of them $\frac{1}{4}$ to $\frac{1}{2}$ inch in size. If the work was done by the bees the pieces would be more nearly the size of ground coffee. You say "there is no way for the mice to get into the hive." Probably not. Neither is there any way for the mouse or mice to get out that are in there, and you probably shut the hive mouse-tight when a little fellow was in there, chuckling to himself how he had outwitted you. It is possible that you closed your hives at a time when it was cold enough for the bees to suffer a mouse in the hive without protest. The first day they can fly they will likely dispatch Mr. Mouse, unless you open the hive so he can get out of the way.

Bees on a Block-Facing Hives.

1. I wish to know how I can remove bees from a pine block three feet long. I found them in a tree and sawed them out, and wish to get them into a hive.

2. I have another hive that is packt in chaff, extra outside three inches thick of chaff, except the front. On Thursday it was warm, and they came out and seemed to be greatly disturbed; they dropt on the snow and were chilled, and remained on the snow. Is it right for them to come out?

3. This hive is facing south. Should it face to the east?

ONTARIO.

ANSWERS.—1. The only difference between this case and transferring from a box-hive as described in your textbook is the matter of splitting the wood. Stand the block on end upside down, and split off part at one side and then at the other side. Don't split off a piece where several combs are fastened to it, but try to take a place where two or three combs will come away with the piece split off. It may also do to split right through the middle, choosing such a spot that the combs will separate without breaking.

2. The excitement on flying after a long confinement is entirely natural, and unless the number that fell on the snow was large no great harm will come of it. It might have been a good thing if you had beaten down the snow in front of the hive. It's a good thing for them to have a flight.

3. I don't really know which is best. Some say south, some say east. When facing south the bees get the sun at the hottest time of the day. But some object to that in warm weather, because the bees will have such a hot place

to cluster in front. You can get over that by raising the hive half an inch or more when hot weather comes, then the bees can cluster on any side of the hive they like. I'd rather manage so as not to have them cluster out on either side.

Moving Bees a Short Distance—Transferring Square Frame.

1. I have my bees on the winter stands, and wish to move them back about 50 feet, and 100 feet to the west of where they stand. When is the best time, and how? Is it not in March?

2. I also have one box-hive colony which I intend to transfer into the Langstroth hive. How am I to go about it, and when? Would it be better to move it first, or transfer on the old stand?

3. What kind of a hive is it that has frames 12x12 inches, running crosswise?

OHIO.

ANSWERS.—1. If they are not packt so that moving would leave them without packing, then you may as well move them the first warm spell. After moving, put a board in front of each hive so as to make the bees bump against it in coming out. That will help to make them mark their location. Don't leave any hives, stands, or anything on the old location that will make it look like home to them. The more different the old place looks the better. Sometimes, however, some bees will persist in clinging to the old spot, in spite of all you may do. In that case it may be advisable to place for them a hive containing a few combs for them to cluster on, then in the evening carry these bees to some colony that is not very strong, repeating it next day or so, if necessary. If moving necessitates unpacking without packing again, then it may be well to wait two or three weeks later, even if a little more inconvenient.

2. You'll find instructions for transferring in your textbook, and you will do well to move early and not transfer till fruit-bloom, unless you prefer to wait till three weeks after swarming—a plan that seems to be growing in favor.

3. I don't know. Perhaps American.

Odd Size Frame—Foundation for Brood-Chamber—Bees Dying.

1. My bees are in hives which contain 11 frames, the size of each frame, inside measurement, being $9\frac{1}{2} \times 12$ inches. Do you think this too large for producing comb honey? If so, what size would you use?

2. Which kind of foundation is best to be used in the brood-chamber—drawn, heavy, or brood-foundation?

3. Yesterday (Feb. 18) was warm, and the bees were nearly all out for a cleansing flight, I suppose. After they were thru flying I noticed a large number of dead bees in front of one hive. I cleaned these away and in a short time there were nearly as many more. I concluded to watch them, and for nearly an hour they continued to come out of the hive, run around for a minute or two, and then die. They were all worker-bees, and fully grown. I am sure they were killed by the bees in the hive, but why I don't know. Can you give me any information about it?

NEW YORK.

ANSWERS.—1. No, not too large, but it's an odd size, and if you haven't so many that it will be difficult to change, you will do well to adopt the standard size, $17\frac{1}{2} \times 9\frac{1}{2}$, outside measure.

2. You will probably be suited with either medium or light brood. The light is more economical, the medium less inclined to sag or warp. Supported by wires or little sticks, the light will be all right.

3. A good many bees die through the winter, and will be carried out when bees have a cleansing flight. But you say the bees came out and died after running around a minute or two, which looks as if some weak "hunger-swarm" had entered, and the intruders were dispatcht by the bees of the colony.

The Omaha Convention Report ran through 14 numbers of the Bee Journal, beginning with the first number in October, 1898. Now we have on hand quite a number of complete sets of that report, which we will mail for just 10 cents each. That is, 14 copies of the American Bee Journal for only a dime. There are doubtless a good many of our new readers who will be glad to get that fine report.

GEORGE W. YORK, Editor.



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United States Bee-Keepers' Association.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change “d” or “ed” final to “t” when so pronounced, except when the “e” affects a preceding sound.

New York to the Front.—Pres. Marks' address, as reported in the American Bee-Keeper, shows that the State Association is making real progress. The State department of agriculture has stipulated to set aside a small fund to aid in the interchange of ideas among the bee-keepers and the promotion of apiculture in the State, and it is proposed to hold a series of bee-keepers' meetings throughout the State under the auspices of the Bureau of Farmers' Institutes.

The Union and the Association.—Pres. Doolittle, of the National Bee-Keepers' Union, writes us as follows in reference to our editorial of several weeks ago:

EDITOR YORK :—I take note of what is said on page 136, about “the door open for the Union,” and in order that it may be kept wide open till the “wedding” is accomplished, I will quote a few sentences from a letter just received from General Manager Newman, in reply to mine to him of recent date:

“I note what you say about consolidation, and am quite willing that you should undertake the matter and work in your own way to bring it about. I am quite willing to ASSIST in arranging DETAILS as I always have been. No one will be more pleased to have the matter amicably adjusted and the two organizations united for the purpose of doing effective work than will I. I feel that in leaving this matter in your hands it will be properly done.”

As I am very favorable to the uniting of the two societies, and as far as I know all those interested are, I do not see why it cannot be accomplished as soon as the necessary details can be arranged; and who could be better fitted to arrange these details than the general managers of both organizations? I am not posted in this detail work, and am way behind with my work on account of broken bones and sickness, so I hope to be released from doing more than is

actually necessary, that the good work of uniting may go on to completion. But I will do all that is necessarily required of me to keep the “door open” till “the twain are ushered in as one flesh.”

G. M. DOOLITTLE,
President National Bee-Keepers' Union.

We do not see why all details may not be arranged soon, so that the two national bee-keepers' societies will be under one banner. We suppose that a vote will need to be taken by the Union before a consolidation can take place, but we think no vote is necessary on the part of the Association, as the Board of Directors were empowered to conclude the negotiations whenever the Union decided to cast in her fortunes with those of the Association.

Nebraska State Fair and Exposition.—The State Board of Agriculture and the managers of the Greater America Exposition, after discussion of the subject, have agreed to a plan for holding the Nebraska State Fair within the Exposition grounds at Omaha, the coming fall.

The Greater America Exposition agrees to place at the disposal of the State Board of Agriculture whatever space may be found necessary for a creditable exhibit in the Agricultural, Horticultural, Dairy and Apiary buildings, and to afford proper accommodations for all the live stock that may be placed on exhibition; and to employ such officers as may be mutually agreed upon to superintend the agricultural, horticultural, live stock, dairy and apiary exhibits.

The Exposition directory appropriated \$100,000 for the organization of a colonial exhibit, and to send a representative to the Philippine islands at once.

No Honey in Southern California.—General Manager Thomas G. Newman, of the National Bee-Keepers' Union, San Francisco, Calif., writing us March 10, said :

FRIEND YORK :—Here is an item from the San Francisco Daily Chronicle of March 8. It is indeed a dismal outlook for Southern California. Animals on the ranches are starving for want of food; the whole country is a parched and arid waste, with no verdure to be seen.

Fraternally,

THOMAS G. NEWMAN.

The item referred to by Mr. Newman reads as follows:

LOS ANGELES, March 7.—The bee-keepers of Southern California are much concerned about the continued dry weather. “We shall make nothing this year,” said C. H. Clayton, Secretary of the Bee-Keepers’ Exchange, to-day. “In good years we have realized as much as 250 carloads of honey from Southern California. Last year only 60 tons were produced, and this year there will be none. The bees are dying off very fast, and many of the bee-keepers will be bankrupt. Fully 50 percent of the bees have died since Jan. 1. No amount of rain could help us now, as far as the honey crop for this year is concerned, tho a good downpour might save some of the bees. I know of only one carload of honey in Southern California. That is being held near Perris. It is from the crop of 1897. It is held at 1½ cents above the Chicago price.”

This is indeed a calamity to the bee-keepers of Southern California. We only wish there was a possible way out of the difficulty, but it seems there is none. It is simply a case of “What can’t be cured must be endured.” Of course, should there be a good crop of honey in other parts of the country, it will not have to compete with California honey this year. So what is one locality’s loss may be another’s gain. But there’s not much comfort in that thought for our Southern California friends.

The only thing we see for our discouraged friends to do is to draw on that limitless fund that Hon. Eugene Secor once called “the bee-keepers’ bank account”—HOPE. But while “living in hopes” let us trust that none may “die in despair.”

The Premium offered on page 172 is well worth working for. Look at it.

The Dot Prizes and Langstroth Fund.—Finally we have the work completed on the Dot Contest Prizes. All who did not feel like contributing their amounts to the Langstroth Fund will have received them before they get this number of the Bee Journal.

The following are the names of those who gave us permission to add the amounts of their cash prizes to the Langstroth Monument Fund:

Fourteen of the 60-cent Prizes—\$8.40.

B. W. Peck	E. D. Lerch	O. Taylor	B. K. Lawlin
John Michaels	Oliver Adecock	Rev. W. Knuf	L. J. Whitney
W. H. Pridgen	Chas. Putman	John F. Logsdon	
H. F. Schultz	H. E. McGregor	R. Lowey	

Sixty-four of the 20-cent Prizes—\$12.80.

E. W. Lanier	Jos. J. Giger	J. K. Smith	L. P. Spring
Paul F. Bratz	Wm. Wilson	D. F. Berry	J. P. Blunk
Alonzo Knights	Wm. Daubenspeck	M. S. Snow	Geo. W. Riker
G. L. Good	Edmund Worthen	F. W. Haynes	Julius Herman
E. August Weiss	G. A. C. Clarke	E. Manicke	F. Sauter
N. H. Vogt	G. W. Lawson	F. C. Wiggins	Miletus Sims
Fred Reitman	B. Volkerling	Wm. Witkowsky	A. T. Smith
Mrs. M. A. Golden	Stephen Lawson	O. M. Pierson	S. S. Butts
A. J. Fisher	Orville Jones	Edw. Scoggan	Percival Goldin
J. W. Lane	Thos. S. Wallace	H. D. Hill	Wm. Stewart
John L. Walther	Philip Roth	Louis Thrill	H. S. Jones
W. Bishop	Jesse Willis	John T. Young	Geo. F. Fall
John K. Frisbee	Allen Lewton	T. J. Green	H. Nootnagel
C. E. Snyder	D. L. Carlton	L. P. Billings	John V. Emmert
Frank Fishell	Carson Wheeler	Stoughton Cooley	M. S. Patterson
J. D. Moffett	A. H. Kanagy	G. F. Hadder	F. C. Snyder

Forty-three of the 10-cent Prizes—\$4.30.

V. W. McNeill	Alfred E. Smith	L. G. Purvis	Wm. J. Healy
J. H. Tait	A. Waddington	H. Lampman	L. Stachelhausen
F. A. Crowell	J. B. Dann	M. McKimme	E. H. Bridenstine
James McNeill	Lillian E. Trester	Wm. Munch	S. M. Bradson
Wm. Russell	R. J. Purcell	Henry Willson	J. F. Merrill
W. L. Copeland	J. A. Tidmore	Ernest W. Doe	L. B. Boardman
Rev. Chas. Horack	C. L. Lindblom	J. A. Munroe	G. F. Sutherland
W. H. Cook	W. E. Owen	Geo. J. Stray	Wm. Rohrig
John Kidney	A. Snideman	Aaron S. Johnson	Jos. Stephenson
F. J. R. Davenport	L. C. George	Fred Welty	John M. Hunzeker
C. V. Mann		John Rogers	

Thirty-nine of the 5-cent Prizes—\$1.95.

Thos. Dougherty	Edward Tanner	Jno. W. Lyell	S. A. Dickson
F. A. Chandler	A. B. Cross	S. D. McClain	O. R. Coe
E. Woodall	Jos. Unterbrink	Mrs. I. D. Harrison	Geo. E. Dudley
F. Motherrhead	Harry Brokaw	Frank L. Goss	Frank Cordvaline
Alpha Wallace	L. G. Clark	M. F. Hathaway	M. M. Stouffer
W. T. Barnes	A. L. Heim	W. B. McGraw	Wm. N. Sessions
J. B. Ausmus	O. B. Montfort	Jas. Quinn	Jas. A. Stone
Fred D. Gibbons	Wm. Goedker	N. Staple	H. W. Savage
Payne Bros.	G. Schermerhorn	Jos. Ouradnik	E. L. Hayes
C. B. Howard	H. W. Roop	H. C. Roberts	

Then there is a list of 18 extra contributions that we have not reported heretofore, amounting to \$13.23, as follows:

Wm. Munch.....\$.10	John Stroebel, Jr....\$.35	L. Kreutzinger.....\$1.20
L. A. Syverud..... .21	C. D. Day..... .50	Mrs. N. L. Stow....2.0
N. Staple..... .25	A. B. Cross..... .50	Lewis J. Whitney...2.00
Wm. Hildebrandt..... .25	J. A. Rosson..... 1.00	John A. Blocher...1.00
C. Harkness..... .30	Edw. S. Goudge....1.00	Total.....\$13.23
Wm. Wilson..... .30	C. Theilmann....1.00	
A. J. Fisher..... .28	W. A. Alder..... 1.00	

All the foregoing amounts to \$40.68. There are 160 of the Dot Contest contributors, upon which we agreed to add two cents each extra, as we would have been compelled to spend that two cents on each in order to have mailed their several amounts to them. This makes \$3.20 more. So the check which we mail Mr. Secor, who has charge of the fund, would be \$43.88. No, we will make it an even \$50.00, and contribute the difference ourselves, tho we have contributed several times before. But a \$50.00 check looks so much better than one written for \$43.88!

Thirty Poisonous Plants.—Under this title the Department of Agriculture has issued Farmers' Bulletin, No. 86. This is a reproduction, in part, of Bulletin No. 20, of the Division of Botany, sent out in July, 1898, and entitled, "Principal Poisonous Plants of the United States."

The statement is made, by the botanist of the Department, that the publication of that bulletin, instead of satisfying the demand for information on poisonous plants, has increased it, and in order to supply the innumerable requests received since its appearance, it has seemed desirable to republish the information which it contained in a condensed, less expensive, and more popular form. As this Bulletin is distributed free, those wishing it should request it by addressing the Secretary of Agriculture, Washington, D. C.



MR. R. C. AIKIN, President of the Colorado Bee-Keepers' Association, read a paper recently on "Fruit vs. Bees," before the Farmers' Institute, which was published in the Loveland (Colo.) Register, of March 8. It filled three columns, and of course was an able and interesting production.

* * * * *

EDITOR E. R. ROOT, in Gleanings, had this kind word to say about our new department:

"The department called 'Afterthought,' by 'Cogitator,' now running in the American Bee Journal, is a good one, and is a real addition to the Old Reliable."

* * * * *

THE M. RUMELY COMPANY was established 46 years ago, and has been doing business all these years at LaPorte, Ind. The M. Rumely separators and engines are known everywhere for the superiority of their construction and the uniform high quality of their work. They make compound traction engines, portable engines and semi-portable engines. In threshers they manufacture the New Rumely Separator. A full line of Dingee-Woodbury horse-powers, saw-mills of various sizes, and Maurer's Automatic Bailing Presses completes the line. Every article is the complete embodiment of good material, good skill and perfect workmanship. Write them for large illustrated catalog which they will take pleasure in mailing to our readers, if the American Bee Journal is mentioned with the request.

* * * * *

KEROSENE EMULSION IN SPRAYING.—The value of kerosene as a material for spraying has been generally appreciated by horticulturists and others for some time, but the difficulty and uncertainty of preparing and using of the various emulsions of kerosene have prevented its general use. With an eye singly fixt on its value, The Deming Co., of Salem, Ohio, set to work experimenting for a machine that would make its own emulsion while in the act of spraying. The result is the "Weed" Knapsack Kerosene Sprayer, the "Success" Bucket Kerosene Sprayer, and the "Peerless" Barrel Kerosene Sprayer. The great success of these several machines is due to the fact that the force applied in pumping injects just the amount of kerosene desired into the spray in such a manner as to make a perfect emulsion. The amount of kerosene is easily regulated by an indicator on the top of the kerosene tank which controls the percentage of oil. The Deming Co.'s illustrated catalog containing complete formulas for spraying, in addition to descriptions of their very complete line of pumps and nozzles, will be sent on application. Be sure to mention the American Bee Journal when writing them.

* * * * *

DR. PEIRO, when in California last summer, learned something about the Chinamen's bee-keeping, and tells of it in the following:

One has to go from home to study some of the least known characteristics of bee-keeping. The celestial is not so much more removed from the best methods as are some of his brothers with less slant of eye and deepest cheek-bones. But as with others not governed by right ways of bee-keeping, results are equally discouraging.

A Chinaman's bee-yard offers the most variegated assortment of hives that have prevailed the last thousand years—the grass, rope cupola, hollow knot-hole, cracker-box, and beer-keg. Bees of any nationality are alike to John. The poetic Italians have no greater honor shown than the more obstreperous German. To him they all sting alike, and their fiery darts are all equally hot. He carries his fan to cool off excessive temperature, a failure in that direction always being yelled in his peculiarly high key—"Hellee!" which being interpreted in the vernacular means "Fire."

The crop of honey obtained from those arid side-hills in California is small indeed, and attended with great vexation of spirit, but I suppose the flavor is the sweeter for the trouble endured.

DR. PEIRO.



Plain Sections and Fences, says Editor Root, were bought by several thousand of their customers last year, only two calling them a failure, while some others who were not entirely satisfied with them were found to have fences of faulty construction.

Don't Experiment on too Large a Scale, is the advice of G. M. Doolittle. It is needless to sacrifice a whole apiary to an experiment, as some seem to think. On the other hand, don't be too much afraid of experimenting on your own hook.—Gleanings.

To Get a Special Breeding-Queen, Gleanings advises to buy four or five queens at \$5.00 or \$10.00 each, breed from all and get a composite stock, getting the queens from different breeders so as to avoid in-breeding. Which may be very good advice for those who don't know how to get rid of their money otherwise.

Japanese Bees, according to K. Aoyanagi, in the American Bee-Keeper, are grayish-yellow, becoming darker with age, smaller, gentler, and hardier than Italians. They build white comb with thin walls that does not bear transportation as well as that made by Italians. They work in rainy weather when Italians stay at home.

Threading Instead of Wiring Foundation.—A writer in the British Bee Journal says he uses cotton-thread instead of wire for fastening foundation, letting the thread be opposite on each side and slightly cutting into the foundation. The foundation is drawn out enough to hold it firm before the bees gnaw away the thread. This "needs confirmation."

Importing Queens.—W. A. Gilstrap, of California, reports in Gleanings that last year he imported six queens from Italy. Four died on the way, one was lost in introducing, and the other one absconded with most of the bees several weeks after being introduced. He thinks a trip of 20 days is too trying, and that it is better to buy of importers in the Eastern States.

Large or Small Hives.—In the American Bee-Keeper, A. E. Manum favors both kinds—the large hive for a location with a short honey season, if no increase is wanted and no feeding desired; the small hive for a location with a honey-flow of long duration and the bees run for comb honey by one who gives close attention at all seasons, and also where increase is desired.

The New York Spraying Law, which went into effect July 1, 1898, is given in American Bee-Keeper as follows:

Section 1.—Any person who shall spray with, or apply in any way, poison or any poisonous substances to fruit-trees while the same are in blossom, is guilty of a misdemeanor, punishable by a fine of not less than \$10.00 nor more than \$50.00.

Section 2.—This act shall take effect July 1, 1898.

How Long After Infection Before Foul Brood is Bad? is a question answered by Wm. McEvoy, in Gleanings. Sometimes in a week, sometimes a year; generally less than three months. Depends upon amount of diseased honey. To become diseased, the honey must be stored in cells where foul brood matter had dried down, then other cells partly filled with sound honey may become infected by honey from the diseased cells.

Bees as Fertilizers.—A bee-keeper gets less fruit from apple and pear trees three miles from any bees than from the home orchard near bees, and G. M. Doolittle advises planting bees nearer than three miles from the dilatory trees. He relates that Gregory, the squash man, tied gauze over the squash-blooms with little squashes at their bases, and invariably the little squashes turned yellow and died. A Kansas Station Bulletin says: "An insufficient supply of bees will hinder the setting of fruit. While other insects

may take part in the carrying of pollen, the fruit-raiser must rely chiefly upon honey-bees. Experience shows that the hungry bees may fly two or three miles, hives should be within half a mile of the orchard or small-fruit patch."—American Bee-Keeper.

Wide Frames, which have been discarded by many, are strongly advocated by G. M. Doolittle in Gleanings. He sees no reason for changing, so long as he gets highest market price and more, having gotten 20 cents last fall in Boston for some of his fancy honey, when it was quoted 14 and 15 cents. Properly constructed wide frames keep sections so clean there is no need of a machine to clean them, and the tin separators he has had in use 20 to 25 years have been cleaned only once.

Strong Colonies for large results, has almost past into an axiom, yet that there are limits must be conceded. In Centralblatt is mentioned a case in which a giant swarm was formed by the uniting of several swarms, until a weight of 13 or 14 pounds was reached. The season was favorable, all colonies being very heavy in the fall. This giant colony yielded a harvest of 73 pounds of comb honey, but in comparison with others it ought to have yielded 120 pounds. A larger result would in all probability have been attained if the big swarm had been separated in two.

Making Haste Slowly.—In the American Bee Journal for Feb. 2, the editor of the Canadian Bee Journal has his attention called to the fact that he had copied half a page in his journal for January from the British Bee Journal without giving credit. In the Canadian Bee Journal for March the editor says: "We therefore hasten to make the correction," adding that his paper has never been accused of systematic pilfering. The latter statement is true, for his pilfering doesn't seem to be particularly "systematic," but it's a little difficult to understand how he has "hastened to make the correction," when it occurs two months after the omission of credit.

Examining Bees in Spring.—A discussion reported in the Canadian Bee Journal makes it appear desirable not to open too early hives for examination, as the breaking of the sealing leaves the hives cooler afterward. Mark the hives that appear light, so as to supply their wants, then it may not be necessary to disturb the others. But weight alone cannot be depended upon, as was brought out by Mr. Alpaugh. Two colonies may weigh the same—one may be light in bees and have more honey than it needs, while the other, strong in bees, may starve unless fed. The usual difference of opinion prevailed as to the advisability of stimulative feeding in the spring.

"**What's the Matter with Holtermann?**" is the anxious inquiry of the editor of Gleanings. On page 106 of this journal, in an item giving a statement of the views expressed by Editor Holtermann, of the Canadian Bee Journal, with respect to no-bee-way sections, the following passage occurs:

"At the Toronto exhibition plain sections took no prizes. Sections of the ordinary kind shown there beat the sections shown by Danzenbaker at Buffalo."

The statement in that passage is a very severe infraction of the ninth commandment, if there is no mistake in what is said in Gleanings for March 1. That this Boiler may not be held responsible for misrepresentation, the following quotation gives verbatim the words of the Canadian Bee Journal: "...how is it that at Toronto, London, and Ottawa exhibitions the plain sections did not distinguish themselves by capturing the prizes on comb honey? The comb honey in the plain section was shown at Toronto, but secured nothing."

It appears, however, according to Gleanings, that plain sections were not exhibited at Toronto. C. E. Taylor sent some plain sections of honey that he found unopened the last week of the fair in Manager Hill's office, where he opened the lot and showed it to Mr. Holtermann. This being brought to the attention of Mr. Holtermann, he said in his paper:

"Again at Toronto plain sections were entered and sent to the exhibition. I saw them there, but thru an oversight they were not judged."

This does not satisfy the editor of Gleanings, who wants evidently to have Mr. Holtermann say in plain words that plain sections were not on exhibition at Toronto, and had no possible chance to take any prizes. Of course that will be the easiest way out, if it is the truth.

Root's Column

PLAIN SECTIONS.

Who said they were not Money-Makers?

Read this Unsolicited Testi- monial:

I have tried the fences the past season; and if any season would show up the poor side of an appliance for bees or bee-hives, the last one surely would. I watch the outcome of using fences very carefully, and note the following: Two hives of bees, side by side, were given the second super each, one containing fences, the other old-style sections $4\frac{1}{4} \times 4\frac{1}{4}$, no fences or separators, both having stored the first supers nearly full. The one containing fences stored nearly double the amount that the other did. Now, I found this to be the case all over the apiary; in fact, the bees seemed to give the preference to supers containing sections and fences, no matter whether they were next to the hive-body or two or three supers above. I won't say why this is so, but will leave that for you. As to the matter of cleaning fences, it is not a very great task, as only the uprights have to be cleaned; and the pleasure of having neat and even sections of honey compensates for whatever extra time is used. W. T. SHERMAN.

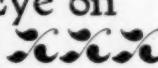
Millard, Wis., Feb. 13.

And now read this, from that careful and conservative bee-keeper,

J. E. Crane, of Middlebury, Vt.:

Will the evolution of the honey-box bring the plain section into general use? I believe it will. One dealer in Washington told me he would pay three cents per pound more for the 4×5 plain-section honey than for the old-style sections. Indeed, I was offered two cents per pound more, for 5,000 pounds of clover honey, to be delivered next fall, than I have been receiving of late for my best grade of honey, if put in plain 4×5 sections. In New York I inquired of Mr. Segelken for his plain section honey, that I might compare it with that in old-style sections. He said he had very little left in plain sections, as such lots were picked up first by retail dealers, who preferred them to the old-style sections. I found the same true in Albany, N. Y., where I stop to look over the honey. As these retail dealers are not in the supply business, I thought their opinions worth recording.

We now have about half a hundred more like them.

Keep Your Eye on
this Column, 

It may save you dollars.

The A. I. Root Company
MEDINA, OHIO.



Bees in Good Condition.

Last year was almost a failure here. We got but 900 pounds of extracted honey and 200 pounds of comb honey. The season bids fair this year. Six hundred pounds of the extracted was dark honey-dew, and the comb honey also. But 300 pounds of extracted in the fall from asters, was very fair. As it is a pretty warm day, I shall make an examination of the bees.

J. WILEY MOUNTJOY.

Anderson Co., Ky., March 8.

Small Loss in Winter so Far.

I had 102 colonies of bees packt for winter, and I think they are wintering fairly well. I saw them Feb. 25, and I think there were but seven dead ones in the lot. I expected to lose very heavily, for the weather was cold and no bright, warm days so they could fly, until the middle of February; since that time they have had a very fair show.

I like the American Bee Journal very much indeed. I don't think anyone should try to keep bees without one or more good papers—the more the better.

Jos. S. SECCOMB.

Cayuga Co., N. Y., March 5.

Satisfied with the Business.

I have 200 colonies all in good shape. I have been feeding flour for three weeks, but my bees are getting natural pollen now from the pussy-willow. I produced 10,000 pounds of section honey last year. My honey is sold here and at Spokane; some of it went to the miners.

I have been in the bee-business for many years. I use the Langstroth-Simplicity S-frame hive. I am satisfied with the business, and also truly satisfied with the American Bee Journal, to which I credit my success. May it lay on my table as long as I live and keep bees, is my prayer.

ISAAC HAYS.

Yakima Co., Wash., Feb. 27.

Not a Promising Outlook.

The outlook for honey this season is not very promising. Many of the fruit-trees, flowers, etc., were in bloom when the February freeze came, and all were killed. Just think of it, zero this far south! We have never had it so cold before. The bees were breeding up fast, but that stopped them for awhile, and weak colonies were lost. I have made a Manum swarm-catcher, Daisy foundation-fastener, section-press, and an Alley queen-trap, besides hives, covers and bottom-boards. This is all done in my spare time at nights, etc. I have a small shop and a good variety of tools, and my brother has a saw-mill and planer, so I don't have much trouble about lumber. Success to the American Bee Journal. LEE ELDER.

Harrison Co., Miss., March 7.

An Anti-Robber Block.

I notice a great many questions in the Bee Journal about stopping robbing, and at the Colorado Bee-Keepers' Convention it was discussed, and none of their theories were ever a success with me. I have a plan of my own that I have never given to the fraternity, and I have never failed to stop robbing. I have stopped them from robbing queenless colonies when they had half of the honey carried out, introduced a queen, and everything was all right.

I take a block of wood somewhat longer than the entrance, $1\frac{1}{4}$ inches square, and saw four or five notches in it large enough for a bee to go in and out. Place it in front over the entrance late in the evening

SECOND-HAND Sixty-Pound Cans For Sale Cheap.

Second-hand 60-pound Cans, two in a case, we offer, while they last, in lots of five or more cases (10 cans) at 40 cents a case, f.o.b. Chicago. They are in good condition. Better order at once if you want some of them. Address,

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ALBINO QUEENS If you want the most prolific Queens—if you want the best honey-gatherers you ever saw—try my Albino. Untested Queens in April, \$1.00; Tested, \$1.50. 9A26t J. D. GIVENS, LISBON, TEX.

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Has no Sag in Brood-Frames.

 Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus Honey.
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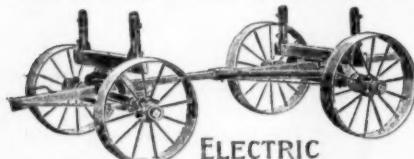
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26E26t Please mention the Bee Journal.

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the best general FARM and BEE paper in existence. Write for sample copy to-day, and for clubbing rates with any paper you want.

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Please mention Bee Journal when writing.

after the robbers quit work, or early in the morning before they come out, and they never offer to go in the small holes, while the bees of the hive will work in and out through the small holes without any difficulty. Almost all of the robbers will alight on top of the block, and if they can't get it away they will soon give up. Now I have never had a colony robbed since adopting this plan.



The above is a diagram of the block.
Clearfield Co., Pa. G. W. BELL.

Weather Hard on the Bees.

Yesterday morning it was 15 degrees and this morning 14 degrees below zero here. It is hard on the bees. They have had but one good flight since cold weather came to stay, and did not fly from all the hives then.

E. D. HOWELL.

Orange Co., N. Y., Feb. 11.

Hard Winter on Bees.

This has been a very hard winter on bees. My neighbors tell me they have lost nearly all of their bees. Most of them are wintering on the summer stands. Mine are wintering nicely in the cellar. I have lost only one so far out of 41. C. L. BURLEY.

Calhoun Co., Iowa, March 11.

Bees Seem All Right.

Bees seem to be all right. They commenced carrying in pollen March 10. We have had the coldest February ever known in Kentucky. I thought the bees would all perish, but I believe they have come through in about as good shape as usual. Score another victory for the golden Italians; they winter as well as any bees. I have tried them all. W. S. FEEBACK.

Nicholas Co., Ky., March 14.

Wintering All Right.

I have 22 colonies of bees wintering all right so far in chaff hives. It was 30 degrees below zero here. I got about 900 well filled sections from the 22 colonies last year. I get the Bee Journal every Thursday. It is all right. Long may it live.

N. RASMUS.

Nemaha Co., Kan., March 14.

Half the Bees Starved.

One-half of the bees in this locality are starved to death. I saved 14 colonies so far. I think as long as we have "seed" we should "sow" and "try again."

JOSEPH UNTERBRINK.

Putnam Co., Ohio, March 12.

A Difference in the Honey.

I was a little puzzled in the work of my bees the past season. There were only two of the 10 of my colonies that I got any surplus honey from. They stood within a foot of each other. The honey from one was of a thin quality and of an inferior taste, so that none of my family except myself would eat it. The other was first quality and gathered, so far as I know, at the same time. There was the same difference between the sealed and the unsealed. I would like Dr. Miller to explain the cause of the difference.

J. C. ARMSTRONG.

Marshall Co., Iowa, March 4.

Long, Hard Winter—Sweet Clover.

It has been a long, hard winter, and the bees don't seem to do much good any more here. Mine did not get more than what will keep them. I got only a very little honey from two or three colonies. I sowed

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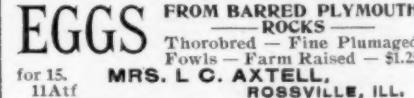
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The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at \$1.00; or for \$1.00 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & COMPANY,
118 Michigan St., Chicago, Ill.

a little white clover and Alsike on a piece of ground last year. By the way, is white clover and sweet clover the same? When I bought the clover I askt if he had any white sweet clover, and he said it was all the same—that all the white was the same kind, there was no difference.

W. Y. STACKHOUSE.

Chester Co., Pa., March 14.

[White or Dutch clover and sweet clover are not at all alike. The former grows only a few inches high, while the latter grows all the way from two or three feet to 10 feet in height.—EDITOR.]

A Little Experience—Facing Hives.

I started the fall of 1894 with one colony. It wintered all right. In 1895 I increased the colony to two; in 1896 to nine; in 1897 to 18; and in 1898 to 25. The increase is rather slow, but sure, as the winter loss is small. I winter them on the summer stands, but have the hives well packed with chaff and sawdust on the outside, of course. I have five, six or seven hives in a group, so I can use 12 or 14 foot boards for packing-boxes. About $\frac{1}{4}$ of my hives face east and the rest west or southwest. The former had only one good flight from the middle of November to the middle of February—about three months' confinement; while the latter had three flights, and have had perhaps only half the loss in bees on the bottom-board. So that is a valuable object lesson as to which way to face hives during winter, and tallies with the advice of both Mr. Doolittle and Mr. Dadant.

Jos. M. REITZ.

Buffalo Co., Wis., March 11.

Colonies Strong and Lively.

I have 300 colonies in good condition at this date in winter-cases, two in a case. They are quite strong and lively on warm days.

I saw some time ago that foul brood was in Schenectady County, and likely to spread, but I hope it may be stayed.

E. H. STURTEVANT.
Washington Co., N. Y., March 14.

Report from Indian Territory.

My bees wintered well. I lost only three colonies out of 80. I wintered them on the summer stands, with super on, and packed with hay and leaves.

I increased from 34 colonies to 80 last season, and secured about 2,000 pounds of surplus, about one-half comb and balance extracted.

I sell my honey in the home market at 15 cents for comb and 10 cents for extracted.

I always speak a good word for the American Bee Journal. I prize it very highly, having taken it ever since I kept bees, and shall continue to do so. I hope this may be a good year for our business.

J. T. HAIRSTON.
Cherokee Nation, Ind. Ter., March 3.

Report of the Season of 1898.

Dec. 1, 1897, I put 204 colonies in the bee-hive, and March 18, 1898, I took out 203, losing one by starvation. I offered them for sale for \$2.00 a colony, but did not reduce them low enough so that I could handle them and do my farm work, so I doubled them down to 150 colonies; then I thought I would put sections on them and that would check them some from swarming.

We had an abundance of white clover bloom, but the bees gathered no honey from that source. Then basswood was the next to bloom and that lasted about four days so that the bees could work on it, on account of rain. Those that had the hive full of brood and honey stored one super each of 24 one-pound sections of basswood honey; and they were but a small share of the apiary. Then there was nothing more to store surplus honey from until buck-



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wheat came into bloom, so I thought, as they swarmed, I would fill the balance of my hives for winter. By so doing I had 216 colonies to put into the bee-house, besides three that I disposed of in the fall, and they stored a little over 2,000 finish sections of honey, besides several hundred partly-finish ones. I fed some of the unfinished ones to the bees, extracted some, and sold some in the home market.

Bees are doing well. On the 12th of this month I strolled down among them. The thermometer on the outside showed eight degrees below zero, and I took it in among the bees for 10 or 15 minutes, when it rose to 46 degrees above zero.

ANDREW M. THOMPSON.
Allegheny Co., N. Y., Feb. 13.

Poor Season Last Year.

The last season was a poor one in this section of South Carolina, tho I am hoping for a good season this year. The bees are now bringing in pollen. The weather is not favorable for them—it is a little too windy. I am working for comb honey. I did not get much honey of any kind last year, for the season was too poor. I am thinking that I will run for extracted honey when I get a few more bees. It will not pay me to buy more now. My bees are all hybrids. I want to Italianize them this year with the finest Italian queens. My stepmother has a few colonies of black bees that are regular, old-fashioned blacks—as black as coal tar.

The first bees I ever owned I found in a tree about four years ago. I have found some since, and bought some, so I now have a fair start in bees. I have learned a good deal about bees the last few years. I have taken the Bee Journal eight months, and I think that is worth twice the subscription charged for it.

I have tried sowing buckwheat here, and it does very well. I planted mine too late last season, and the frost killed it before the wheat had ripened. It helped the bees a lot, for they would work on it when all other flowers had failed.

JULIAN HALLMAN.
Lexington Co., S. C., March 6.

Discouraging Prospect for Honey.

I notice in my last Bee Journal that some of the bee-keepers are telling of 25 and 30 degrees below zero. Here in Clayton Co., Iowa, the first of February we had 17 days in succession that the thermometer did not get above zero, and it was down to 38 degrees below some of the time; and this was without any snow on the ground. The ground is frozen six feet deep. If the bees and clover stand that I guess they will stand almost anything.

I started in the winter with 130 colonies, but have only 105 left now, with prospect of losing a good many more. The ones I lost had plenty of honey in the outside combs; as long as they had honey over the cluster they were all right. When that was gone it was so cold they could not move sidewise, so they starved right at the top of the hive.

When they talk about large hives I am with them, only I want my hive large up and down.

I have moved to town, leaving my bees on the farm four miles from here. I expect to drive back and forth, and take care of them this season, altho the prospect for a honey crop is very discouraging.

F. B. FARRINGTON.
Clayton Co., Iowa, March 12.

Cold Weather for Bees.

EDITOR YORK:—I send you one of our country papers so that you can see what kind of weather we have had the last two weeks; and Monday, Feb. 13, there was blinding snow flying, we could see no distance, and it was very cold. With it all I did not forget my bees, but after breakfast at 6 a.m., and my farm-stock was fed and cared for, my two boys and I went to work to get the bees in a good, dry cellar. We

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Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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This is a good time to send in your Beeswax. We are paying 26 cents a pound—**CASH**—upon its re-

made a fire in it and got the thermometer to register 46 degrees, and they seemed as happy as fighting chickens; and, by the way, I felt good, too, in knowing that they were all alive. Fifty-two colonies, all with plenty of honey except one which I soon fixed; almost all of them got up to the top of the combs with plenty of honey on each side of them. I lookt in some of the hives a few days later when they were in the cellar, and found the bees on each side of the hives on the honey enjoying themselves.

Last Monday killed a great many bees. My brother, S. J. Hammond, lost 10 out of 100 colonies, and another neighbor lost two out of eight.

The last few days have been warmer and the snow is melting slowly. Yesterday the thermometer was 48 degrees in the shade.

We have had snowdrifts 10 feet deep. I kept two days last week to shovel roads open to get out. With all the snow and no regular mail the good old Bee Journal got here at the regular time.

L. A. HAMMOND.

Washington Co., Ind., Feb. 20.

Bees in Good Condition.

I have eight colonies of bees in good condition, considering the cold weather they have gone thru, as they have been on the summer stands all winter and the thermometer registered 16 degrees below zero.

I am using the 12-frame Langstroth hive. I like it very well. I am delighted with the reports from other bee-keepers in the Bee Journal, and am well pleased with the paper itself.

Wm. HITCHCOCK.

Lonoke Co., Ark., March 3.

Bees All Right so Far.

My bees are all right so far. I examined some in February after the cold spell, and found some brood and also some hatching drones. Those few I had in the cellar I put them out-doors, as it was too damp for them inside, and they are doing all right.

Lucas Co., Ohio, March 3. M. BEST.

A Believer in Big Hives.

In 1868 I commenced working with bees and tried to commence right. I read Gleanings awhile, and then took the American Bee Journal, which I read yet. And now what I don't know about bees of course is not worth knowing!

The colony I had on the scales all last summer made a gain of 54 pounds in eight days while basswood was in bloom; that was the only gain for the season here. Many colonies starved before winter, and many others are dying now. I have lost 6 colonies, and have 104 with plenty of stores in the middle stories on the summer stands.

Let Mr. Doolittle have small hives and Mr. Dadant large hives, if they are suited with them; but Gallup and I want big hives. For the last 10 years I have used the 3-story 15-frame Langstroth hive, which makes a big hive. Now when there comes nectar, so the bees can gather from 10 to 20 pounds a day for two or three weeks, those hives will hold it, and the bees don't have to look around for more room or a new home. They won't swap such a hive full of honey for nothing. And the honey can remain until thoroly ripe, without being in the way of the bees, and always makes the best honey when extracted. My bees never swarm from these hives. I hope others will try the big hive and report, from different localities. I feel that Dr. Gallup and I are on the right track for the most honey and best queens. (Say, Doctor, let's stay with it and convert the world to big hives and good queens.) GEO. W. RIKER.

Lucas Co., Iowa, Feb. 25.

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Convention Notices.

Texas.—The Texas State Bee-Keepers' Association will hold their 21st annual convention at W. R. Graham & Son's, Greenville, Texas, the first Wednesday and Thursday in April, 1899. All interested are invited. No hotel bills to pay. W. H. WHITE, Sec.

Utah.—The Utah Bee-Keepers' Association will hold their regular semi-annual convention April 8, at 10 o'clock a.m., in the city and county building, Salt Lake City. A full program in the interest of the industry will be presented, and all bee-keepers are cordially invited. Among the subjects to be considered will be the purchasing of supplies, the disposal of our products, and the best method for the protection of the industry. It is desirable to have every county represented, either personally or by letter. Questions are solicited.

Mill Creek, Utah. J. B. FAGG, Sec.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, March 7.—Fancy white comb brings 13c., and there is a good demand for it. No. 1 white is also wanted at 11@12c., depending upon quality. Lower grades of white, amber and mixt colors range from 8@10c., with dark and buckwheat 7@8c. Extracted white clover and sage, 8c; basswood and alfalfa, 7c; amber grades, 6c; buckwheat, 5@6c. Beeswax, 27@28c. Market generally healthy in tone with best grades of honey scarce. R. A. BURNETT & CO.

DETROIT, March 9.—Fancy white comb scarce and higher and we now quote it 13@14c; No. 1, 12@13c; fancy dark and amber, 10@11c. There is considerable poor honey in the commission houses which is offered at 8@9c. Extracted, white, 6@7c; dark, 5@6c. Beeswax, 25@26@1c. M. H. HUNT.

KANSAS CITY, March 10.—Fancy white comb, 13c; No. 1, 12c; amber, 11c; dark, 10c. Extracted white, 6c; amber, 5c; dark, 4@5c. Beeswax, 25@26@1c. C. C. CLEMONS & CO.

NEW YORK, March 8.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 6@7c. Comb honey is pretty well cleaned up now and we expect to dispose of the balance of our stock during this month. Excepting California there is not much stock of extracted on our market. Demand is fair at unchanged quotations. Beeswax, 27@28c.

HILDRETH BROS. & SEGELKEN.

SAN FRANCISCO, March 9.—White comb, 9@10c; amber, 7@8c. Extracted, white, 7@7@8c; light amber, 6@6@7c. Beeswax, 24@27c.

Market is not favorable to buyers, more especially for desirable extracted stocks of which are decidedly light. Comb is in moderate supply, and has to depend almost wholly on local custom for an outlet. Quotable rates remain as previously given.

BOSTON, March 10.—The demand for comb honey is very light, with full stock on hand. We quote our market: Fancy white, 13@14c; A No. 1, 12c; No. 1, 11@12c; light amber, 9@10c. No demand for buckwheat. Extracted, white Northern stock, 7@8c. Beeswax quiet at 27@28c. BLAKE, SCOTT & LEE.

OMAHA, March 13.—The stock of comb honey in this market is very light. There are not over 300 cases of all grades in first hands. Demand continues fairly active. Fancy white quotable at 13c; choice, 12c; No. 1 amber, 11c. Extracted well cleaned up.

BUFFALO, March 10.—There is only very little dark poor honey in our market, which is selling at mostly 8 cents. Some strictly fancy white comb honey would bring about 12 cents. Little, if any, here. No extracted to mention. Fancy pure beeswax, 30c.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1, 12@12@13c; No. 1, 11@12c; dark or amber or old, 7@8c. Extracted, in barrels or kegs, white, 7@7@8c; dark, 5@6@7c. Beeswax, 25@27c.

Since our last report we have had a very good market for honey, and the demand has been very good for all grades, especially for sections of the best quality, and the demand is good now and small supply. We encourage shipments of best comb. Extracted, fair demand.

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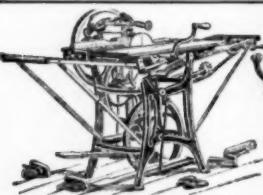
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